

WHAT IS CLAIMED IS:

Sub 39 1. A transceiver for transmitting signals coming from a source of signal-carrying coherent light to another transceiver and for receiving signals, carried by coherent light, coming from another transceiver, said transceiver comprising a receiving reflecting surface for reflecting the received signal-carrying coherent light, said receiving surface defining an outer edge, wherein it further comprises a single aperture for outputting the coherent light to be transmitted, said single aperture extending near to the outer edge of the receiving surface.

2. A transceiver according to claim 1 and including a main dish, wherein said main dish further comprises a first transmitting reflecting surface for reflecting the coherent light to be transmitted in a direction substantially perpendicular to the incoming direction.

3. A transceiver according to claim 2, wherein said main dish further comprises a second transmitting reflecting surface for reflecting the coherent light reflected by the first transmitting reflecting surface towards the output aperture.

4. A transceiver according to claim 1, wherein said output aperture is substantially in the form of an annulus and is formed on a plane surface.

5. A transceiver according to claim 1, wherein said output aperture is formed in the main dish.

Sub 40 6. A transmission system wherein it comprises a first and second transceivers according to any of claims 1 to 5 placed at a distance one from the other and arranged in such a way that, considering a small divergence, the coherent light beams emerging from the transmitting aperture of the first transceiver overlap at the surface of the second transceiver and vice versa.

7. A method of through-air transmitting/receiving an information-carrying coherent light beam, said method comprising the step of providing a first

and a second transceiver placed at a distance one from the other, each of said transceivers comprising a receiving reflecting surface for reflecting the coherent light received from the other transceiver, said receiving surface defining an outer edge, wherein the method further comprises the step of providing each of said transceivers with a single aperture for passing the coherent light beam to be transmitted, said aperture substantially extending along the outer edge of the receiving surface.

8. A method according to claim 7, wherein it further comprises the steps of:

passing said coherent light beam coming from the source through a first lens;
deviating the direction of the coherent light beam passed through the first lens by means of a first conical reflecting surface of the main dish; and
deviating again the direction of coherent light beam reflected by the first conical reflecting surface, by means of a second conical surface of the main dish for passing through the single aperture.

9. A method according to claim 7, wherein the step of providing a single aperture comprises the step of providing a single aperture substantially in the form of an annulus and formed on a plane surface.

10. A method according to claim 9, wherein that said step of providing a single aperture comprises the step of directly providing said aperture on the main dish.

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